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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,002	08/02/2001	Martin Huonker	HOE-640	5825

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LAW OFFICE OF BARRY R LIPSITZ  
755 MAIN STREET  
MONROE, CT 06468

EXAMINER
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FLORES RUIZ, DELMA R

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/921,002

Applicant(s)

HUONKER ET AL. 

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 30 - 57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



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## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30 – 39 and 53 – 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (5,663,978) in view of Takigawa et al (5,844,309).

***Regarding claims 30, 32, 33 – 39 and 57***, Marshall discloses a laser amplifying system comprising; a plate like solid state body (see Fig. 1, Character 100) comprising a laser active medium (see Fig. 1, Character 3) , said solid state body having two oppositely located flat side; a radiation source for optically pumping (Column 6, Lines 36 – 56) said laser active medium to generate an amplified radiation field for output from said solid-state body; a cooling member (see Fig. Character 12) with a support surface for said solid-state body; a first flat side being thermally coupled to said support surface. Marshall discloses the claimed invention except for adhesive layer that comprises a cross-linked adhesive material said adhesive material being of type is essentially

invariant in volume when changing from a liquid state into a solid, cross-linked state. It would have been obvious at the time of applicant's invention, to combine Takigawa of teaching a adhesive layer that comprises a cross-linked adhesive material said adhesive material being of type is essentially invariant in volume when changing from a liquid state into a solid, cross-linked state with laser amplifying because the technology of a heat -harden able resin, which can be cross-linked by the action of heat, is so versatile that it has been used in a variety of applications including the production of paints, ink, rubber, adhesives, and the like, textile processing in the field of textile materials, the production of sealing materials in the field of electronics related materials. Marshall discloses the claimed invention except for the adhesive layer having an active adhesive layer area with a heat resistance of less than  $5 - 10K \times mm^2/W$  and adhesive layer has a tensile strength of more than  $1 - 25 N/mm^2$ . It would have been obvious at the time of applicant's invention, to combine Takigawa of teaching a the adhesive layer having an active adhesive layer area with a heat resistance of less than  $5 - 10K \times mm^2/W$  and adhesive layer has a tensile strength of more than  $1 - 25 N/mm^2$  with laser amplifying because it would have been obvious to one of ordinary skill in the art at the time the invention was made to the adhesive layer having an active adhesive layer area with a heat resistance of less than  $5 - 10K \times mm^2/W$  and adhesive layer has a tensile strength of more than  $1 - 25 N/mm^2$ , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

**Regarding claim 31** Marshall disclose the active adhesive layer area is at least that area of the adhesive layer bordering on a volume area of the solid state body having a pumping power density of the pumping light radiation field of at least approximately 80 % of the maximum value present in it (said limitation only recites facts and features that are well known and expected, the same features that essentially result from the use or application of a the solid state body having a pumping power density of the pumping light radiation field of at least approximately 80 % of the maximum value , and therefore said limitations are said to be inherently disclosed in the teachings of (Takigawa).

Claims 40 – 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (5,663,978) in view of Takigawa et al (5,844,309) further in view of De Voe et al (5,766,277) .

**Regarding claims 40 – 43**, Marshall in view of Takigawa discloses the claimed invention except for the adhesive passes from the liquid state into the solid, cross-linked state without any transfer of substances, the adhesive is an adhesive hardening by way of a supply of energy by means of radiation, radiation with light and radiation with UV. It would have been obvious at the time of applicant's invention, to combine De Voe of teaching a the adhesive passes from the liquid state into the solid, cross-linked

state without any transfer of substances, the adhesive is an adhesive hardening by way of a supply of energy by means of radiation, radiation with light and radiation with UV with laser because such materials, broadly called epoxides, include both monomeric and polymeric epoxides and can be aliphatic, cycloaliphatic, or aromatic. They can be liquid or solid or blends thereof, blends being useful in providing tacky adhesive films. These materials generally have, on the average, at least two epoxy groups per molecule (preferably more than two epoxy groups per molecule). The polymeric epoxides include linear polymers having terminal epoxy groups (e.g., a diglycidyl ether of a polyoxyalkylene glycol), polymers having skeletal oxirane units (e.g., polybutadiene polyepoxide), and polymers having pendent epoxy groups (e.g., a glycidyl methacrylate polymer or copolymer). The molecular weight of the epoxy resin may vary from about 74 to about 100,000 or more. Make coat composition based on epoxy and polyester, which also contain the polyfunctional acrylates are also higher in viscosity after exposure to UV radiation. The energy source can be thermal (heat), E-beam, UV light, visible, or a combination of UV and thermal energy.

Claims 44 – 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (5,663,978) in view of Takigawa et al (5,844,309) further in view of Okoshi et al. (5,665,473).

**Regarding claim 44** Marshall in view of Takigawa discloses the claimed invention except for the adhesive has a viscosity of less than 1000nPh x s in the non-cross linked state. It would have been obvious at the time of applicant's invention, to combine Okoshi of teaching a the adhesive has a viscosity of less than 1000nPh x s in the non-cross linked state with laser because it would have been obvious to one of ordinary skill in the art at the time the invention was made to the adhesive has a viscosity of less than 1000nPh x s in the non-cross linked state, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

**Regarding claims 45 – 49**, Marshall in view of Takigawa discloses the claimed invention except for the adhesive layer id s free from filler material, the filler material has nanoparticles, the filler material has filler bodies with a sizes in the micrometer range and the filler material has filler bodies consisting of one or more of the substance boron nitride, diamonds, solver copper and/or gold. It would have been obvious at the time of applicant's invention, to combine Okoshi of teaching a the adhesive layer id s free from filler material, the filler material has nanoparticles, the filler material has filler bodies with a sizes in the micrometer range and the filler material has filler bodies consisting of one or more of the substance boron nitride, diamonds, solver copper and/or gold with laser because it would have been obvious to one having ordinary skill in the art at the time the invention was made to the adhesive layer id s free from filler material, the filler

material has nanoparticles, the filler material has filler bodies with a sizes in the micrometer range and the filler material has filler bodies consisting of one or more of the substance boron nitride, diamonds, silver copper and/or gold, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

***Regarding claims 50 – 52*** Marshall I view of Takigawa discloses the claimed invention except for the adhesive layer are bordering on the active volume area has a thickness of less than 50, 5 and 2  $\mu\text{m}$ . It would have been obvious at the time of applicant's invention, to combine Tabuchi of teaching a the adhesive layer are bordering on the active volume area has a thickness of less than 50, 5 and 2  $\mu\text{m}$  with laser because it would have been obvious to one of ordinary skill in the art at the time the invention was made to the adhesive layer are bordering on the active volume area has a thickness of less than 50 $\mu\text{m}$ , 5  $\mu\text{m}$  and 2  $\mu\text{m}$ , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.




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### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (703) 308-6238. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

  
Delma R. Flores Ruiz  
Examiner  
Art Unit 2828

  
Paul Ip  
Supervisor Patent Examiner  
Art Unit 2828

DRFR/PI  
July 25, 2003